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Book review

Yuval Noah Harari, *Sapiens: A brief history of humankind*, Harvill Secker: London, 2014.

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To all intents and purposes, Harari's book was an improbable addition to my reading list. After all, a comprehensive historical analysis of the three revolutions that significantly shaped the course of humanity is not quite so central to emotion researchers in the context of contemporary work. Surely, the cognitive revolution (about 70,000 years ago) and the agricultural revolution (about 12,000 years ago) seem like the safe province of evolutionary psychologists, anthropologists or historians to name a few. In consequence, there is neither a need on my part nor am I qualified to comment on these sections of that book. So, what insights could this book possibly offer to management learning scholars (and beyond) in their efforts to advance their discipline theoretically, empirically and practically? As a scholar also interested in (no, sceptical about) the domain of organisational neuroscience, it was Harari's account on the Scientific Revolution (starting 500 years ago) towards the end of his book that consumed my attention. In fact, his account of the Scientific Revolution assumes more the shades and shapes of a biotechnological revolution in the latter part of the book. Together with an interview in *Süddeutsche Zeitung*,[1] this part of the book helped add further pixels to an already emerging picture on the ethical and practical consequences of an unbridled excitement in relation to neuroscience as a means to select and develop key personnel.

In the context of that biotechnological revolution, the sobering thesis that Harari's proffers in his book is that – in the next 100 years or so – the most significant revolution will be the human condition as such (*das Menschsein selbst*). This is a crucial thesis, for despite all historical changes in recent millennia, the human condition served as a constant. *We* did not change. That is, we had the same bodies and more or less identical physical and cognitive capacities. Harari argues that this constant is bound to change, and he refers to biotechnology, *inter alia*, as a manifestation of that imminent change towards a transhumanistic society. He notes:

> Perhaps in a few decades … genetic engineering and other forms of biological engineering [i.e., including neuroscience] might enable us to make far-reaching alterations not only to our physiology … but also to our *intellectual and emotional capacities*. (p. 403, italics added)

He bemoans – and I agree – that technological ambitions are often presented in terms of remedies for physical or psychiatric pathologies (e.g. 'we do it to cure diseases or save lives'), although scientists are often not fully aware of the wider social implications this might have, especially if the boundary between *therapeutic* and *enhancement* applications is blurred (Lindebaum and Raftopoulou, 2014). In doing so, Harari highlights the powerful rhetoric harnessed to justify the pursuit of certain scientific projects. That is, because scientists aim to cure diseases, it is hard to

argue against that. However, successful cognitive or emotional enhancement in *healthy* human has far more dramatic implications than merely the discovery of a cure for brain-related diseases. For instance, in the aforementioned interview, Harari suggests that there is a proverbial arms race among Israeli students in relation to the usage of Ritalin – originally developed for therapeutic purposes (e.g. treatment of attention deficit hyperactivity disorder), but now also used to boost learning and memory in healthy individuals. The logic – according to Harari – is this: 'If the person next to me takes Ritalin, then surely I need it as well', and so a process is initiated whereby a performance differential emerges between those who can afford Ritalin versus those who cannot. Note, however, that the effect sizes of these drugs on various kinds of memory and whether they are short or long term in nature are small to modest overall (Ilieva et al., 2015).

On reflection, while Harari succeeds in balancing cautionary predictions about the future of humanity with the prerequisite prudence (e.g. what may be around the corner may never materialise as the past has shown), many advances in neuroscientific studies applied to enhancement purposes do occur already (e.g. Cohen Kadosh et al., 2012; Parasuraman and McKinley, 2014). And make no mistake, research and practice within the broader discipline of management learning are already reflecting a keen interest in how neuroscience can be harnessed to improve desirable organisational outcomes. For instance, Waldman et al. (2011) have already defined 'un-inspirational' leadership (i.e. an ineffective form of leadership according to them) in terms of a brain profile deficiency, thereby defining business goals in terms of a pathology that has to be remedied (for a detailed critique, see Lindebaum, 2013a, 2013b). The logic that follows from the Waldman et al. (2011) study has important consequences for management learning, for it is appreciably attractive for scholars and practitioners to screen for those future leaders (and other staff) who comply with these 'socially desirable brain profiles'. By contrast, individuals who lack these desirable brain profiles naturally qualify for neuroscientific interventions (e.g. neurofeedback training). It is an all-too-obvious logic that is being employed here, briefly expressed along these lines: X is related to an important outcome at work higher (e.g. performance), and there is evidence that X can also be developed by way of interventions (in this case, for instance, neurofeedback training or the use of Ritalin). Harari would agree, for he argues in his book that – while we were bound by our biological limits for millennia – the onset of intelligent design (as a successor of natural selection) is a 'harbinger of things to come' (p. 399). To illustrate, the Chartered Institute of Personnel and Development (or CIPD, 2014) suggests 'how HR can use neuroscience to boost learning and development, cut staff turnover and enhance customer service', adding that one way to achieve this is to help 'staff to gain knowledge of how the brain is structured [which] can help learners build self-awareness and improve their personal effectiveness'. Views such as these closely relate to the alterations to our intellectual and emotional capacities as mentioned earlier in the quotation from Harari's book, and it serves to underscore the relevance of this to management learning as a field of inquiry and practice. Yet, I harbour doubts about these kinds of 'motherhood' statements and their validity: as if *structural* knowledge of the brain alone – without any deeper understanding how the brain holistically *functions* – could ever explain complex issues such as self-awareness or effectiveness in the context of particular work setting or situation (Lindebaum and Jordan, 2014).

Harari is alarmed about the possibility that we might lose control in the context of biotechnological advances. This rapid progress entails that relevant legislation is oftentimes outpaced. The case of biotechnology (including neuroscience) is highly germane in this respect. In the aforementioned interview, Harari notes that governments and legislators seemingly do not even notice these developments (i.e. how technological advances – current or forthcoming – necessitate the introduction of new, or the amendment of existing, legislation). Instead, large corporations (e.g. Google) pursue visions of technological progress with unrelenting zeal. If Harari is correct in suggesting that governments are lagging behind with the relevant legislation governing the remit,

boundaries and conduct of biotechnological research, to what extent are existing ethical frameworks fit for purpose? For instance, given that a brain scan is a unique 'fingerprint' of an individual, how can the data be truly anonymised? Seen in this light, how can the data processor sever the link between an individual's identity and the data that were collected for the purpose of the study (Hallinan et al., 2014)?

If Harari is correct in predicting the transhumanistic society, the current hyperbolic excitement about organisational neuroscience can potentially expedite its arrival. This is no dystopian message as I have highlighted here and elsewhere; research informing the broader management learning discipline is already influenced by, and draws inspiration from, neuroscientific idea and (ideals). Will a transhumanistic society be a better society? Any possible response is likely to be contentious, for our ability to engineer – in all likelihood – our desires soon too leads Harari not to ask 'What do we want to become', but 'what do we want to want?' (p. 414). Harari is sceptical whether ethical concerns can hold technological advances for too long. He is probably correct in this assessment. However, I maintain that if our task as social scientists is to examine how we as individuals behave in and influence the world around us, then thorough and informed ethical critiques and discussions in which social scientists (concerned with management learning and beyond) exercise strong influence on the future emergence and manifestations of the transhumanistic society are of utmost importance. It is then not a question of whether or not, but *how* a transhumanistic society might take shape.

Note

1. Article retrieved from http://www.sueddeutsche.de/digital/universalhistoriker-yuval-harari-wir-werden-gewaltige-ungleichheiten-erleben-1.2337102 (accessed 5 March 2015).

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